

pigment from the examples furnished by you, but as it occurs in such minute quantities I was obliged to give up that idea, and to experiment on the entire wing; this may account for my not being able to re-

store the blue color by means of alkalies.

Yours truly,

Joseph M. Wilson, S. B.

Charlestown, Mass.,

25 July 1880.

NOTES ON *PHOXOPTERIS ANGULIFASCIANA* ZELL.

BY CHARLES HENRY FERNALD, ORONO, ME.

On the 23d of May 1878, between one and two p. m., I saw a small Tortricid fluttering in a very peculiar manner over a patch of clover. Approaching nearer, so that I could observe more closely, I found that she was depositing her eggs on the leaves of the white clover (*Trifolium repens*).

She fluttered about on the upper side of the leaf for a little time, then standing over and in a line with the midrib, she deposited an egg on the midrib, about one-third the distance from the end. In some cases only one egg was deposited on a leaf, in others, two; but in the latter case the second egg was deposited in the same manner as the first, but at a third of the distance from the opposite end of the leaf. Having observed the manner of depositing the egg, I attempted to capture the female, but failed to do so. I therefore took up the plants into a flower pot, taking them into the house where their transformations could be observed.

The eggs were of an oval form, somewhat flattened, so as to rise but little above the surface of the leaf. The length was 0.8 mm., width 0.6 mm., thickness about 0.4 mm. Color dull grayish white, transparent at the edges; surface reticulated,

as could be seen under a strong lens, with a play of colors.

The moth was not easily disturbed while depositing her eggs, and readily distinguished between the leaves of clover and sorrel, alighting several times on leaves of the latter, and as quickly flying off to another leaf, not stopping till she came to the leaves of clover.

Being called away from home at this time, I did not learn the time required for the eggs to hatch, but on my return I found that the young larvae had hatched and were feeding. They drew the edges of the leaflet up together, securing them with silk, and fed on the epidermis of the upper side of the leaflet, and on the parenchyma, leaving the epidermis of the lower side of the leaflet—now the outside of their domicile—intact, while the excrements were deposited in one end of the closed leaflet.

After having eaten all the food furnished by one leaflet, they at once left for another, going down one leafstalk and up another.

I did not have an opportunity to make a description of the larva at the time, but remember it as being dull glassy green. Early in July the moths emerged, and proved to be *Phoxopteris angulifasciana* Zell.